

Marine Intercept Program (MIP) Tracker: An Adaptive Data Collection Tool

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Background

The Marine Intercept Program (MIP) is a voluntary public health intervention implemented across the United States Marine Corps (USMC) in a coordinated effort to reduce the probability of the progression of suicidal ideations or attempts to completed suicide for Active Duty Marines and attached Sailors. A large reason for adopting the MIP model comes from The Caring Letter project (CLP)¹. This is a suicide prevention program that used the conclusions of several studies which suggested that repeatedly sending caring messages may reduce the number of suicidal outcomes. Preliminary results of the CLP pilot study showed that it was feasible for use in military treatment facilities.

MIP is embedded within a larger program called the Community Counseling Program (CCP). Potential MIP clients are identified via exhibited suicidal ideations (SIs) and/or suicidal attempts (SAs) which are reported via Serious Incident Reports (SIRs), Personnel Casualty Reports (PCRs), and/or Department of Defense Suicide Event Reports (DoDSERs). Active Duty Marines with reported SI or SA are reported to installation Community Counseling Program (CCP) staff for Marine Intercept Program (MIP) services. These at-risk individuals are then contacted via telephone by appropriate CCP staff to inform them about MIP and offer MIP services to that potential client. MIP counselors offer counseling services if the Marine or Sailor accepts MIP services.

The MIP was launched 8 November 2013, and the need emerged for an adaptive design public health database capable of accommodating MIP program data and communication needs. There are examples of adaptive technology which use response feedback to adjust the tool which is similar to how USMC uses the MIP Tracker. In one example, researchers found that by accounting for both the deadline of the 'critical events' and their level of severity works well in achieving performance goals and increases system performance². A second example discusses the increased oil spill detection based on adaptive radar technology³ which allows researchers to track large oil spills sooner than traditional methods. An adaptive database also aids in surveillance and evaluation of the MIP program. MIP Tracker allows for both front end and back end adaptation. That is to say that questions can be changed in the tool, and those questions are analyzed can also change dynamically. These needs include data entries for referrals from HQMC to CCP staff, individual case notes outlining follow-up activities, clinical remarks, demographic information regarding SIs and SAs, and MIP utilization across USMC. In response, headquarters-level clinical staff, data surveillance staff, technical database developers, program evaluation team, and other

key individuals collaborated to build a data collection tool for MIP so that all associated stakeholders' needs were addressed. Thus, the MIP Tracker was created as a unique database that houses client demographics, suicidal ideation or attempt event's information, and the counselor's efforts at the installation-level CCPs.

Methods

Data Surveillance, Program Evaluation, ManPower Information Technology, Functional Systems, and Community Counselling staffs played key roles in developing the programmatic and technical requirements of MIP Tracker. This collaborative process expedited the design of the MIP Tracker tool. These groups worked closely together to provide a product that was useful from the end user all the way to the Headquarters level for analysis and reporting purposes. Information technology staff conveyed the capability of the MIP Tracker tool. The tool was authorized to store personal identifiable information (PII), and allowed users flexibility to change the format of the questions/fields. Community Counselling, Data Surveillance, and Program Evaluation discussed the fields that would need to be kept or added for the purposes of this tool.

Data Surveillance provided counselor level webinars to help installation staff with navigating this new system. These webinars were an important first step to educate users about the capabilities of the MIP Tracker. The webinars continue to provide a strong introduction for new counselors and provides a refresher course to others. These webinars allowed Data Surveillance to deliver evidence based programmatic protocols and describe the advantages of MIP and the MIP Tracker to attendees.

Potential MIP clients are identified from exhibited SIs and/or SAs reported to HQMC through Serious Incident Reports (SIRs), Personnel Casualty Reports (PCRs), and/or Department of Defense Suicide Event Reports (DoDSERs). MIP referral allocation is conducted daily by the HQMC Behavioral Health Branch Data Surveillance section. The daily notifications are then entered for long term health outcome tracking and assigned to the appropriate CCPs for Active Duty Members or to the psychological outreach program (PHOP) for Reserve Members.

According to MARADMIN 073/14⁴, CCP counselors should offer assistance using evidence informed practices by expressing concern for the Marine, and address safety concerns by assessing for suicide and coordinating care services. MIP counselors offer counseling services in the form of caring contact (follow-on calls) according to a specified protocol, individual counseling, safety plan development, and classes. Evidence shows that engagement in caring services can prevent future thoughts of and behaviors indicative of suicide¹. Service Member acceptance of services is voluntary. If MIP services are accepted, the counselor may establish and record all caring contacts (follow-on calls), and note any pertinent information from those contacts in drop down, multi-select, and narrative fields within the MIP Tracker.

Adaptive Data Collection Tool Design

Since Headquarters and field staff began utilizing the MIP Tracker on 1 August 2014, continual feedback has increased the capabilities and value of the database. Data analysts are guided by programmatic discussions to add any new questions that have value to Headquarters and field staff for identification,

long term analysis, or counseling purposes. New questions allow all vested stakeholders to better understand the needs of individual MIP cases and increase the visibility of individuals who may require additional services.

As the MIP Tracker is a fairly new embedded asset within the overall MIP program, the adaptive design of the tool allows leadership, counselors, and other vested stakeholders an opportunity to incorporate other topics or areas in MIP Tracker at the individual or population level. This adaptive data collection improvement process may benefit the quality of life of the Marines and Sailors who had participated in MIP activities, and bolster public health prevention efforts within USMC.

Customized reports are another highly-valued capability of the MIP Tracker. These reports, which are generated by data entry in the MIP Tracker itself, allow other key stakeholders an opportunity to track and ensure that reporting is correct for individuals, and that high risk individuals have an opportunity to be provided additional caring contact.

An example of this came through as recently as the summer of 2015. Key stakeholders collaborated to design and deliver a new custom report to ensure a warm hand off for Marines and Sailors needing a higher echelon of non-medical support. Through these collaborative discussions new questions were incorporated in the MIP Tracker. When certain responses are chosen a customized report would alert other staff to go through their internal processes to provide outreach services to these at-risk individuals while keeping contact with CCP counselors. Other custom reports allows some USMC staff to ensure that reporting requirements are met, and collaboration with Command and other medical stakeholders. Finally, there are other custom reports in development which would inform public health efforts. Individuals who are working on suicide prevention efforts from a public health perspective do not necessarily have the need to know the PII for persons who have SIs and/or SAs. For those professionals, new custom reports are being developed without personal identifiers but do include population risk with regards to key demographics and certain event information elements.

Current and Future Utilization of this Adaptive Design

One of the strongest benefits of using this tool is its ability to adapt to changing needs. This is a unique capability that is not found in other Behavioral Health data surveillance tools. The ability of the data analyst to program new fields and responses to fields in the live database allows counselors to provide high quality counseling care to at-risk Marines and Sailors who participate in MIP.

With respect to data collection, MIP Tracker has multiple capabilities at both the Headquarters and field levels. Having all these data in an easy to access location allows for quicker data manipulation, cleaning, data analysis, and data interpretation. These resulting data products can ultimately be useful for prevention efforts and better inform counselor to client interactions. Policy and other key decisions are also affected by the results of client interactions recorded in this database.

Preliminary descriptive statistics have begun to paint a picture of the makeup of the USMC at-risk population. These statistics can also provide an overview of the level of effort that counselors are tasked with on an incremental basis. Describing the composition of the at-risk population is an essential first

step for public health intervention efforts. Behavioral Health is in the process of investigating the results of higher level analyses tests which can answer important comparison questions at the population level. Any example of investigating differences among at-risk populations can be utilizing statistical tests which compare the suicidal ideation population vs the suicide attempt population by gender, rank groups, or age groups.

Collaborations with other stakeholders are strengthened when those individuals were shown the capabilities of the MIP Tracker tool. PHOP individuals, who provide similar counseling services to Reserve Marines, are currently reviewing the capability of a newly built PHOP Tracker. This would allow the individuals who are responsible for outreach services for non-activated Reserve Marines to systematically track, reconcile, and add clinical information for all reports of SIs and/or SAs. Wounded Warrior is also interested in offering additional services to Marines or Sailors who are not geographically close to a CCP location, who are geographically separated from a CCP and have had two or more suicidal ideations, have had two or more reported suicidal attempts, or are reported as being very seriously injured. These efforts are strengthened by the custom report capabilities of the MIP Tracker.

Discussion

Easier primary descriptive and secondary statistical analyses allow Headquarters staff to identify at-risk groups and individuals. This improves communication of at-risk groups, targets counseling efforts, and paints the larger USMC at-risk picture for leadership to inform their efforts around policy implementation and funding allocation.

An intricate web of internal and external stakeholders use the MIP Tracker in one form or another. In future efforts, prevention analysts will be able to identify at-risk populations at lower levels of USMC organization structures. USMC leadership is able to identify gaps in reporting and start coordinating educational messaging to suicidal behavior reporters and communicate closely with competent medical authorities who complete DoDSER information for suicidal attempts. Headquarters staff can also generate quick view statistics of ideations, attempts at many different levels which are vital information for USMC leadership and public health efforts. All these individualized or custom reports have one unified source of information which streamlines at-risk messaging and clears confusion about individual events at all levels of USMC organization.

Also as the program evolves and changes in the identification and determination of suicidal behaviors, so can the tool with its flexible design. Questions can be added at the individual record level in a very timely manner if leadership or other stakeholders have a need to add this information at the client or population level.

In future analytic and programmatic efforts, predictive models will be assessed as more data are available from this public health initiative. Predictive models using demographic information and incorporating other types of risky behaviors such as domestic violence, or substance abuse events at the individual level will be utilized for determining risk factors for ideations, attempts, and suicides. As a result of this analysis, we hope to inform data driven policies and resource allocation decisions from identified risk factors.

Limitations

One area of improvement can be found in the stability of data collection. If there are many changes to the live database then long term analyses of those fields are difficult. Changing questions in survey design or in a live database is an area of debate among experts. While in most public health efforts rapid changes in the questions are not a recommended practice, USMC's MIP may be an exception to the rule. This tool's flexibility allows counselors to keep track of unique client parameters, and it may assist them in identifying client risks.

Another area of improvement involves Command engagement in MIP. While most SIRs and PCR's are received with names of the at-risk Marines or Sailors, there are times when that information is not included. The policies which outline the SIR, PCR, and DoDSER requirement are owned by other USMC organizations. This often leads to difficulty in obtaining appropriate language in SIRs or PCR's. Leadership is actively involved in engaging stakeholders and promoting MIP to all Command individuals who may need the additional opportunity to be fully engaged in MIP.

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